

# SGE-8 signal generator kit instructions

Rev. 1.0 Sep 19, 2016 Produce by yiqi

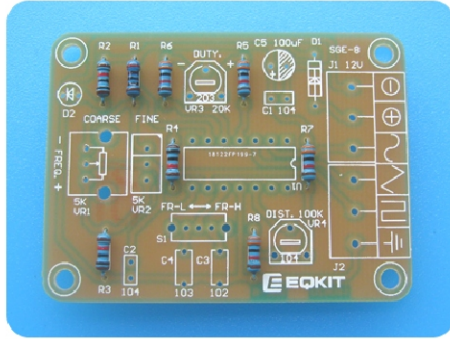
## Tools you need:

- ① Iron (30W)
- ② Solder wire
- ③ Multimeter
- ④ Tweezers
- ⑤ Wire cutters

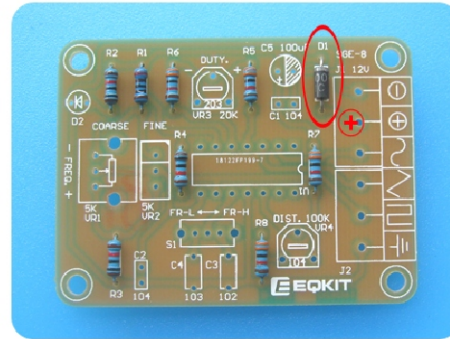
## Precautions:

- ① Check part values & quantities against part list
- ② Always meter resistor values before soldering
- ③ Understand all part polarities and orientations

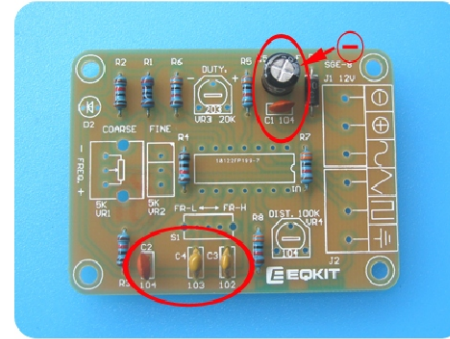
### 1. Resistors



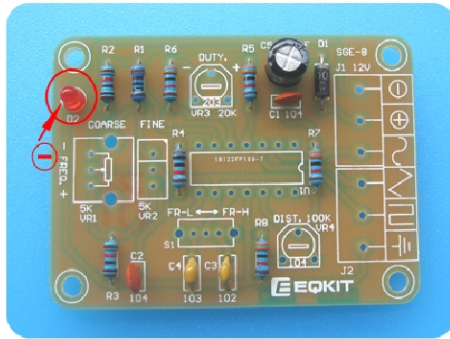
### 2. Diode (Attention direction)



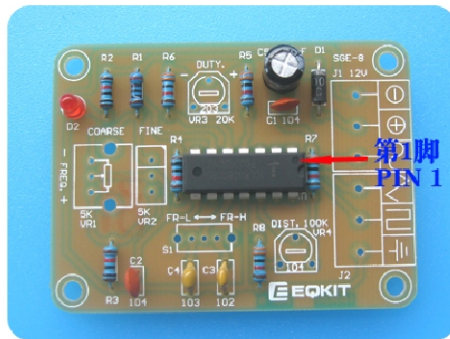
### 3. Capacitors (C5 Attention direction)



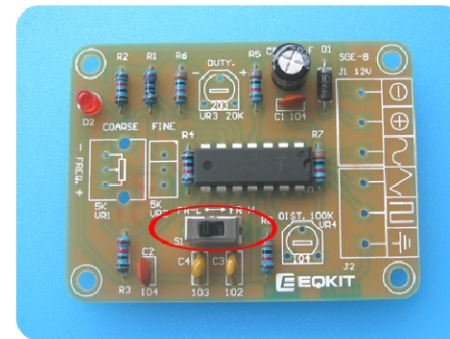
### 4. LED (Attention direction)



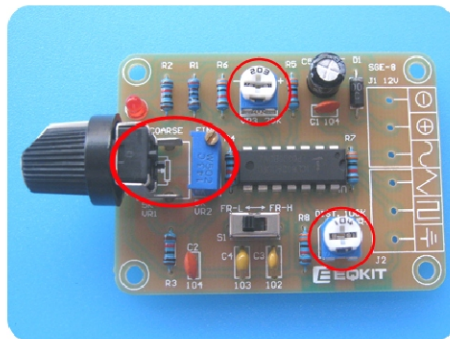
### 5. Chip (Attention direction)



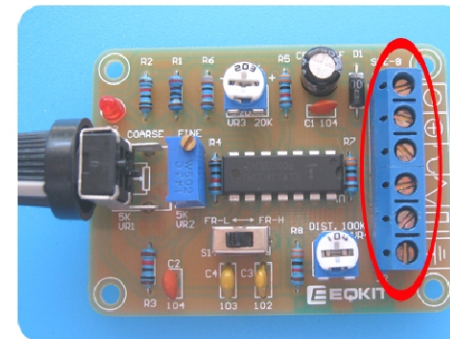
### 6. Switches



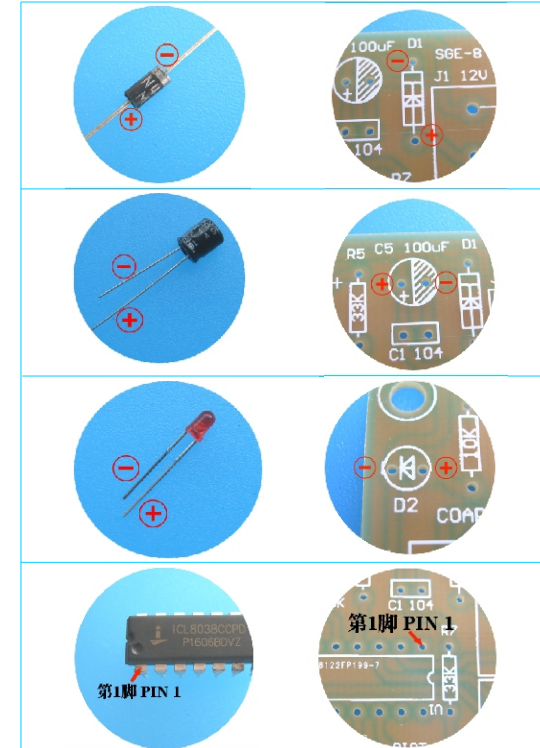
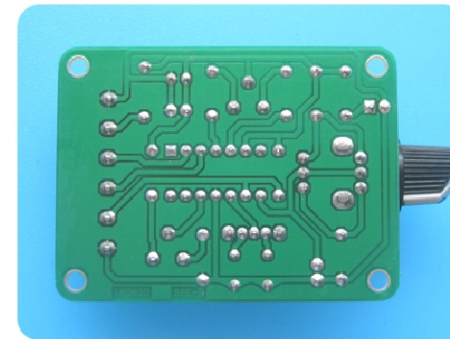
### 7. Potentiometer&Knob



### 8. Terminals (Attention direction)

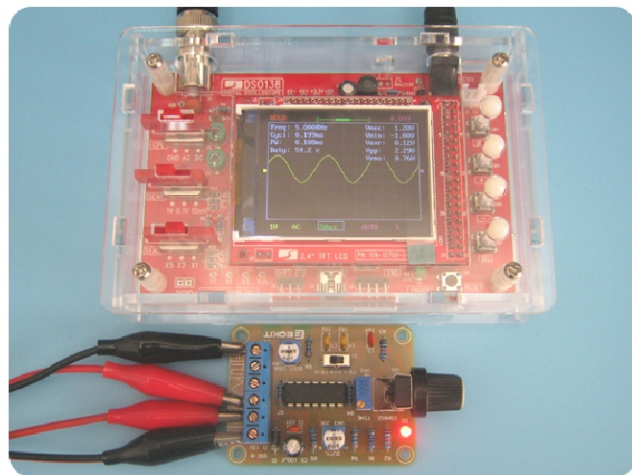


### Finished creation

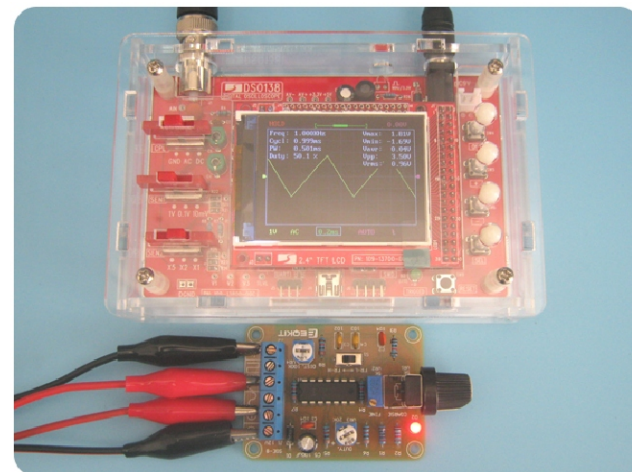


## Component list:

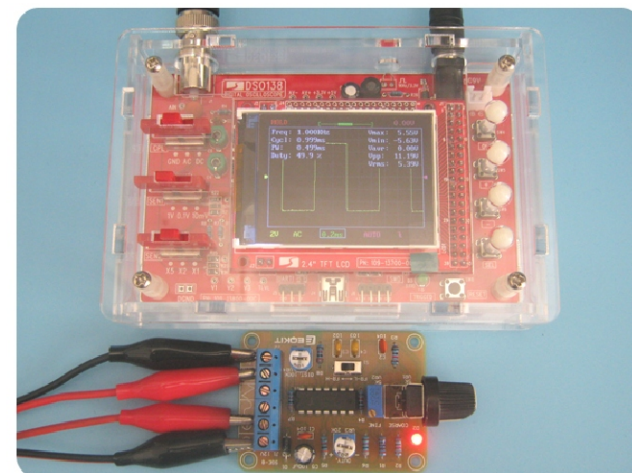
Name	Model	Number	QTY
Res	200R	R1	1
	10K	R2 R3 R4	3
	33K	R5--R8	4
	104P	C1 C2	2
Cer Cap	102P	C4	1
	103P	C3	1
	220uF/16V	C5	1
Diode	1N4007	D1	1
LED	3mm red	D2	1
Poten	5K	VR1	1
	5K	VR2	1
	20K	VR3	1
	100K	VR4	1
Swith	1P2T	S1	1
Chip	ICL8038	U1	1
Terminal	301-3P	J1 J2	2
Knob	Black	1	1
PCB	58.4*47.3mm	1	1



**Sine wave**  
 Freq range: 50Hz--7.5KHz  
 Vmax: 1.28V  
 Vmin: -1.00V  
 Vavr: 0.12V  
 Vpp: 2.29V  
 Vrms: 0.76V  
 Duty: 48%--56%



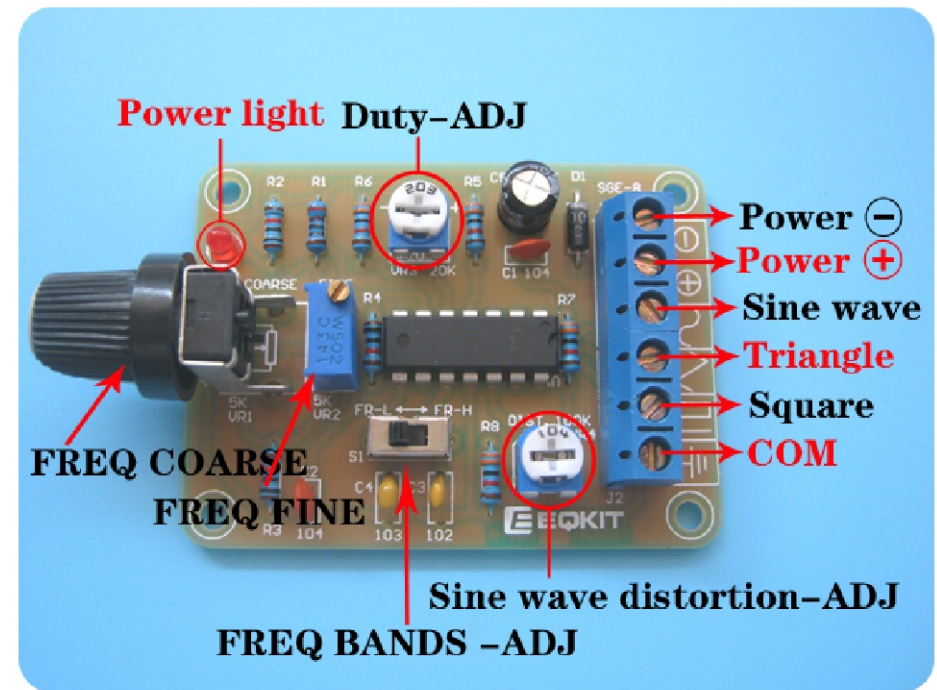
**Triangle wave**  
 Freq range: 50Hz--7.5KHz  
 Vmax: 1.81V  
 Vmin: -1.69V  
 Vavr: 0.04V  
 Vpp: 3.50V  
 Vrms: 0.96V  
 Duty: 49%--55%



**Square wave**  
 Freq range: 50Hz--7.5KHz  
 Vmax: 5.55V  
 Vmin: 5.63V  
 Vavr: 0V  
 Vpp: 11.19V  
 Vrms: 5.39V  
 Duty: 27%--63%

All the data listed are typical values for your reference only.

How to Use: (Voltage=DC12V)



Schematic:

